

Claims

We claim:

1. A current controlled oscillator comprising:
 - 5 a first section providing a first differential output;
 - a second section providing a second differential output;
 - a loading structure comprised of resistive and reactive elements electrically connecting the first differential output with the second differential output, the resistive and reactive elements having values chosen such that the
 - 10 resistive elements substantially extend the linear operating frequency range of the current controlled oscillator.
2. The current controlled oscillator of claim 1, wherein the first and second section are comprised of parallel and series connections of transistors.
3. The current controlled oscillator of claim 1, wherein the loading structure
 - 15 includes transistors and capacitors.
4. The current controlled oscillator of claim 3, wherein the transistors of the loading structure have gates which are tied to ground.
5. The current controlled oscillator of claim 3, wherein the transistors of the loading structure have gates which are tied to a power supply rejection ratio
 - 20 compensation section for compensating for variations in power supply voltage.
6. The current controlled oscillator of claim 5, wherein the power supply rejection ratio compensation section, the first section and the second section are powered by the same power supply voltage and the power supply rejection ratio compensation section includes a diode and a current source.

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7. The current controlled oscillator of claim 3, wherein the loading structure includes a resistance in series with a capacitance, both of which are in parallel with another capacitance.

8. The current controlled oscillator of claim 3, wherein the resistive
5 elements are transistors and the reactive elements are capacitances.

9. The current controlled oscillator of claim 8, wherein the transistors are field effect transistors.

10. The current controlled oscillator of claim 8, wherein the field effect transistors are pMOS.

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